KINGDOM OF CAMBODIA
NATION RELIGION KING

Cambodia
Demographic and Health Survey
2005

Preliminary Report

National Institute of Public Health
Ministry of Health
Phnom Penh
Cambodia

National Institute of Statistics
Ministry of Planning
Phnom Penh
Cambodia

MEASURE DHS
ORC Macro
Maryland USA

CAMBODIA
DEMOGRAPHIC AND HEALTH SURVEY
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PRELIMINARY REPORT

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PREFACE

This report presents the preliminary findings from the Cambodia Demographic and Health Survey (CDHS) 2005 that are expected to be used by policy makers to evaluate the demographic and health status of the Cambodian population in order to formulate appropriate population and health policies and programs in Cambodia. The forthcoming final report and summary report of the CDHS will contain more detailed findings.

This survey was sponsored by USAID, ADB using a grant from DFID, UNFPA, UNICEF, and CDC/GAP. Technical assistance was provided by ORC/Macro. The National Institute of Public Health of the Ministry of Health and the National Institute of Statistics of the Ministry of Planning were the project implementation agencies. Six months of fieldwork for the CDHS took place from early September 2005 to early March 2006.

The main objective of the CDHS 2005 was to obtain current information on demographic conditions, family planning, infant and child mortality, domestic violence, and health related information such as breastfeeding, antenatal care, child immunization, children's diseases and nutritional status of children and mothers. For the first time in Cambodia, national prevalence of HIV/AIDS has been measured.

We thank USAID, ADB, DFID, UNFPA, UNICEF, and CDC/GAP for sponsoring the project. We gratefully acknowledge the support and encouragement extended by H.E. Prof. Eng Huot, Secretary of State, Ministry of Health, H.E Ouk Chay Secretary of State, Ministry of Planning, and other members of the Executive Committee and Technical Committee who contributed to the successful implementation of the survey.

We wish to express great appreciation of the work carried out by all persons involved in the CDHS and especially the NIS staff at the central and provincial offices and the NIPH staff who worked with dedication and enthusiasm to make the survey a success.

Finally, we would like to express our special thanks to all the local authorities involved and all study participants who gave their valuable time to make this survey possible.

Honorable Excellency San Sy Than
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National Institute of Public Health

I.   INTRODUCTION

The Cambodia Demographic and Health Survey of 2005 (CDHS) was carried out by the National Institute of Statistics (NIS) and the National Institute of Public Health (NIPH). ORC Macro provided technical assistance to the project through the Demographic and Health Surveys (DHS) program. The survey was funded by USAID, ADB (under the HSSP, using a grant from the United Kingdom DFID), UNFPA, and UNICEF.

Data collection was conducted from early September 2005 to early March 2006 on a nationally representative sample of more than 15,000 households. All women age 15-49 in these households and all men age 15-49 in a sub-sample of one-half of the households were eligible to be individually interviewed. While expanded in content, the CDHS 2005 is a successor to the CDHS 2000.

The CDHS 2005 provides data to monitor the population and health situation in Cambodia. Specifically, the CDHS collected information on a broad range of demographic, health, and social issues such as household characteristics, utilization of health services, malaria prevention and treatment, maternal and child health, breastfeeding practices, early childhood mortality, maternal mortality, nutritional status of women and young children, fertility levels, marriage, fertility preferences, awareness and use of family planning methods, sexual activity, women's status, household relations, awareness and behavior regarding AIDS and other sexually transmitted infections, and for the first time, national HIV prevalence in Cambodia.

This preliminary report presents only a sub-set of results of the CDHS. A comprehensive analysis of the data is forthcoming. While considered provisional, the results presented here are not expected to differ significantly from those to be presented in the final report. The main goal of the CDHS is to inform strategies of development for Cambodia.

II. SURVEY IMPLEMENTATION

A. Sample Design

The sample was designed such that resulting statistics can be calculated for the country as a whole and for urban and rural areas. Survey estimates can also be reported for 19 study domains. Fourteen of the 19 domains are individual provinces: Banteay Mean Chey, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kandal, Kratie, Phnom Penh, Prey Veng, Pursat, Siem Reap, Svay Rieng, Takeo and Otdar Mean Chey, while the remaining ten provinces are paired into 5 groups of provinces:

> Group 1: Battambang, and Krong Pailin;
> Group 2: Kampot and Krong Kep;
> Group 3: Krong Preah Sihanouk and Kaoh Kong;
> Group 4: Preah Vihear and Steung Treng;
> Group 5: Mondol Kiri and Rotanak Kiri.

It should be noted that the domains are defined somewhat differently from the domains defined in the 2000 CDHS report.

A representative sample of 15,046 households was selected for the CDHS 2005 sample. The sample was selected in two stages. In the first stage, 557 villages (also known as clusters or enumeration areas) were selected with probability proportional to the village size. The village size is the number of households residing in the village. Then, a complete mapping and listing of all households existing in the selected villages was conducted. The resulting lists of households served as the sampling frame for the second stage of sample selection. Households were systematically selected from those lists for participation in the survey.

All women age 15-49 who were either permanent residents of the households in the CDHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. In addition, in a sub-sample of one-half of all households selected for the survey, all men age 15-49 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey.

B. Questionnaires

Three questionnaires were used for the CDHS: the Household Questionnaire, the Woman Questionnaire, and the Man Questionnaire. The questionnaires are based on the questionnaires developed by the worldwide Demographic and Health Surveys (DHS) program and on the questionnaires employed during the CDHS 2000 survey. To reflect relevant issues in population and health in Cambodia, the questionnaires were adapted during a series of technical meetings with various stakeholders from government ministries and agencies, non-governmental organizations and international donors. The final draft of the questionnaires was discussed at a stakeholders' meeting organized by the NIS. The adapted questionnaires were translated from English into Khmer and pre-tested in May 2005.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. For children under 18, survival status of the parents was determined. The Household Questionnaire also collected information on the following topics:

- Dwelling characteristics
- Accidental death and injury
- Physical impairment
- Utilization of health services and health expenditures for recent illness and injury
- Possession of iodized salt
- Possession of mosquito nets
- Height and weight of women and children
- Hemoglobin measurement of women and children
- Blood collection from women and men for laboratory testing of HIV

The Household Questionnaire was the instrument for identifying women and men who were eligible for the individual interview. The Woman Questionnaire was used to collect information from all women age 15-49 and was organized into 13 sections:

- Respondent background characteristics
- Reproduction, including a complete birth and death history of respondents' children, and information on abortion
- Birth spacing (also known as contraception)
- Pregnancy, postnatal care and children's nutrition
- Immunization, health and women's nutrition
- Cause of death of children (also known as verbal autopsy)
- Marriage and sexual activity
- Fertility preferences
- Husband's background and woman's work
- HIV/AIDS and other sexually transmitted infections
- Maternal mortality
- Women's status
- Household relations (also known as domestic violence)

The Man Questionnaire was administered to all men age 15-49 living in every second household in the CDHS sample. The Man Questionnaire was organized into 5 sections:

- Respondent background characteristics
- Reproduction
- Marriage and sexual activity

- HIV/AIDS
- Other reproductive health issues

Administration of Questionnaires to Respondents

Not all sections of the three questionnaires were administered to all households or to all respondents. Men were interviewed in every second household. This same half of the sample included drawing blood from women and men age 15-49 for laboratory testing of HIV. This same half of the sample also included anthropometric measurement (height and weight) of women age 15-49 and children under age 5 years. This same half also included drawing blood from women age 15-49 and children age 6-59 months for measurement of hemoglobin in the field. This same half of the sample also included cause of death of children in the Woman Questionnaire. The other half of the sample did not include interviews with men, HIV testing, anthropometry, hemoglobin measurement, or cause of death. Instead, this other half was again divided in half, with one-quarter of the entire sample being asked the women's status and household relations modules in the Woman Questionnaire, and one-quarter of the survey having neither of these two modules. The household relations section was asked to only one woman per household within the one-quarter of households selected for the household relations questions. The entire sample was comprised of over 15,000 households, resulting in interviews with 14,243 households, 16,791 women, and 6,717 men.

C. Training of Field Staff

Nearly all aspects of data collection were pre-tested in May 2006. Twenty four women and twenty three men were trained for 13 days in the administration of the CDHS survey instruments and blood collection techniques. Five days of interviewing and blood collection were followed by a full day of interviewer debriefing. Interviews and blood collection were conducted in 257 households across three rural and two urban villages. Most participants of the pretest returned to serve as field editors and team leaders for the main survey, and also underwent the full training for the main survey.

The purpose of the six week main training course was to produce 114 field personnel capable of collecting the full range of data included in the survey. Main training was conducted from late July through early September. Nineteen field teams were each comprised of a team leader, field editor, three female interviewers, a male interviewer, and a driver. Team leader and field editor trainees were selected by NIS and interviewer trainees were selected by NIPH.

The first week of training was devoted to the Household Questionnaire: Household Schedule, Illness and Death, Treatment of Illness, Household characteristics, and Malaria. Other Household Questionnaire components were reviewed and then covered in detail in subsequent weeks. Two weeks were devoted to the 13 Sections of the Woman Questionnaire. Additional time was spent reviewing the Household Questionnaire, including the selection of women for the Household Relations Module, and Consent Statements for blood collection, and conversion of ages and dates of birth between the Khmer and Gregorian calendar.

One week was devoted to additional activities: the Man Questionnaire, measuring height and weight of women and children, sample implementation and household selection (logistically complicated and requiring two days of training), collection of Geographic Positioning System data, testing of household salt for iodine, provision of anemia test results to respondents, provision of HIV informational pamphlets to all respondents, provision of vouchers for future counseling and testing of HIV at a VCT site, organization of documents and materials for return to the head office.

One week was devoted to blood collection activities: collection of dried blood spots (DBS) for future laboratory testing of HIV antibodies, blood collection and field testing of hemoglobin levels to assess levels of anemia, recording blood procedures in questionnaires, obtaining consent from respondents, storage and transport of DBS.

Training concluded with one week of Field Practice, all full days from early morning until evening.

D. Blood Collection

Collection of Dried Blood Spots for Laboratory Testing of HIV

In a sub-sample of one-half of all households selected for the survey, women and men who were interviewed were asked to voluntarily provide some drops of blood for laboratory testing of HIV. To obtain informed consent for blood taking for HIV testing, the interviewer explained the procedures, the confidentiality of the data, and the fact that test results could not be linked or made available to the respondent, and provided respondents with information about how they could obtain their HIV status by going to a center that provides voluntary counseling and testing (VCT) services. Selected sites had been provided with rapid test kits to perform HIV tests for CDHS respondents arriving at the site with a voucher.

If respondents consented, the interviewer collected a capillary blood sample, taken from the palm side of the end of a finger, punctured with a sterile, non-reusable, self-retractable lancet. Before taking blood, the finger was wiped with an alcohol swab and allowed to air dry. Blood drops were collected on a filter paper card. The anonymous filter paper card was given a bar code label, with a duplicate label attached to the respondent's Household Questionnaire. A third copy of the same bar code label was affixed to a Blood Sample Transmittal Form in order to track the blood samples from the field to the laboratory. Filter papers were dried overnight in a plastic drying box, creating dried blood spots (DBS). The following day, interviewers packed each DBS filter paper card into its own zipper-locked bag with desiccant to absorb moisture, and a humidity indicator card. Individual bags where then placed into larger zipper-lock bags with other blood spots collected from that sample point. Blood samples were periodically collected in the field, along with the completed questionnaires, and transported to NIS headquarters in Phnom Penh for logging in, after which they were taken to the National Institute of Public Health laboratory for later HIV testing. As is customary in HIV surveys, all the blood samples rendered HIV positive and a five percent random sample of all the HIV negative samples will be tested again by an external laboratory at the CDC/Atlanta laboratories in the United States.

CDHS estimates of HIV prevalence will be representative of the entire population age 15-49. In addition, CDHS estimates of HIV prevalence will be representative of the population age 15-49 within each of the 19 domains into which the country has been divided. These estimates will be presented after a thorough analysis of the data, including external quality control of the laboratory work. CDHS estimates of HIV prevalence will be presented in the Final Report.

Hemoglobin Testing

Hemoglobin testing is the primary method of anemia diagnosis. The CDHS 2005 included anemia testing of children 6 to 59 months old and women age 15-49 in the same one-half of CDHS households that were selected for HIV testing. A consent statement was read to the eligible respondent or to the parent or responsible adult for children and young women age 15-17. This statement explained the purpose of the test, informed them that the results would be made available as soon as the test was completed, and requested permission for the test to be carried out.

Anemia levels were determined by measuring the level of hemoglobin in the blood, a decreased concentration characterizes anemia. The concentration of hemoglobin in the blood was measured in the field using the HemoCue system. The HemoCue instrument is a special purpose photometer designed specifically for the determination of hemoglobin levels. A capillary blood sample was taken from the palm side of the end of a finger, punctured with a sterile, non-reusable, self-retractable lancet. The blood drop was collected in a HemoCue microcuvette, which serves as a measuring tool, and placed in the HemoCue photometer to determine the level of hemoglobin in the blood. If the respondent had also consented to providing a blood sample for laboratory testing of HIV, the blood drop collected for testing of anemia was collected after having collected the DBS, described above. A pamphlet was given to each respondent,

explaining symptoms of anemia, prevention methods, and the individual results of the hemoglobin measurement of the respondent and any children for whom she gave permission to be measured. Each person whose hemoglobin level was lower than the recommended cutoff point (testing severely anemic) was advised to visit a health facility for follow-up with a health professional.

E. Fieldwork

Fieldwork launched immediately upon the conclusion of field staff training. Nineteen teams were disbursed to the 19 sample domains. Fieldwork supervision was conducted by NIS, NIPH, and ORC Macro through regular visits to teams to review their work and monitor data quality. Additional contact between the central office and the teams was maintained through cell phones. In many teams, the team leader was the same person who had performed the CDHS mapping and listing of households in CDHS selected clusters, and thus was well acquainted with the data collection sites assigned to their team. Fieldwork was conducted from early September to early March. Questionnaires and blood samples were regularly delivered to NIS and NIPH, respectively.

F. Data Processing

The processing of the CDHS data began as soon as questionnaires were received from the field. Completed questionnaires were returned from the field to NIS headquarters, where they were entered and edited by data processing personnel who were specially trained for this task, and had also attended questionnaire training of field staff. Processing the data concurrently with data collection allowed for regular monitoring of team performance and data quality. Data tables were generated to check various data quality parameters. As a result, feedback was given on a regular basis, encouraging teams to continue in areas of high quality and to correct areas of needed improvement. Feedback was individually tailored to each team. Data entry, which included 100 percent double entry to minimize keying error, was completed 20 April 2006. Data editing was completed mid May 2006. Blood samples were sent to NIPH for storage and testing. Laboratory testing of blood samples was initiated in November 2005 and completed in April 2006.

II. PRELIMINARY FINDINGS

A. Response Rates

Table 1 shows household and individual response rates for the CDHS 2005-05. A total of 15,046 households were selected for the sample, of which 14,534 were found to be occupied during data collection. Of the 14,534 occupied households, 14,243 were successfully interviewed, yielding a household response rate of 98 percent.

In these households, 17,223 women were identified as eligible for the individual interview. Interviews were completed with 98 percent of them. Of the 7,213 eligible men identified, 93 percent were successfully interviewed. There is little variation in response rates by residence.

Table 1. Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, (unweighted) Cambodia 2005

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	3,288	11,758	15,046
Households occupied	3,175	11,359	14,534
Households interviewed	3,101	11,142	14,243
Household response rate	97.7	98.1	98.0
Individual interviews: women			
Number of eligible women	4,278	12,945	17,223
Number of eligible women interviewed	4,152	12,639	16,791
Eligible women response rate	97.1	97.6	97.5
Individual interviews: men			
Number of eligible men	1,728	5,485	7,213
Number of eligible men interviewed	1,586	5,131	6,717
Eligible men response rate	91.8	93.5	93.1

B. Characteristics of Respondents

The distribution of women age 15-49 and men age 15-49 by background characteristics is shown in Table 2. Sixty percent of women are currently married or living together as are sixty percent of men. Because men tend to marry later in life than women, 39 percent of men in the sample have never been married as opposed to 32 percent of women. A higher percentage of women (8 percent) have been divorced, separated or widowed, as opposed to two percent of men.

Table 2. Background characteristics of respondents

Percent distribution of women and men by background characteristics, Cambodia 2005

Background characteristic	Women Weighted percent	Women Weighted number	Women Unweighted number	Men Weighted percent	Men Weighted number	Men Unweighted number
Age						
15-19	21.4	3,595	3,639	24.7	1,659	1,706
20-24	18.1	3,039	3,012	18.2	1,219	1,180
25-29	12.2	2,047	2,100	12.3	829	848
30-34	12.4	2,079	2,032	12.0	809	751
35-39	13.2	2,224	2,243	12.7	856	860
40-44	12.6	2,108	2,077	11.8	791	783
45-49	10.1	1,700	1,688	8.2	554	589
Marital status						
Never married	31.8	5,344	5,184	38.7	2,601	2,574
Married	59.6	10,007	10,237	58.8	3,952	3,978
Living together	0.4	59	44	0.2	13	13
Divorced/separated	4.3	725	694	1.7	116	119
Widowed	3.9	657	632	0.5	36	33
Residence						
Urban	17.7	2,969	4,152	16.8	1,132	1,586
Rural	82.3	13,822	12,639	83.2	5,585	5,131
Province						
Banteay Mean Chey	3.9	649	779	3.8	252	294
Kampong Cham	12.6	2,113	791	12.9	869	330
Kampong Chhnang	3.3	555	804	3.5	234	345
Kampong Speu	5.2	869	923	5.2	347	366
Kampong Thom	4.8	798	899	4.9	330	362
Kandal	9.6	1,609	876	10.1	681	376
Kratie	2.0	330	854	1.9	127	317
Phnom Penh	11.3	1,893	1,105	11.0	736	423
Prey Veng	8.3	1,393	883	7.2	481	309
Pursat	2.9	480	817	3.0	201	341
Siem Reap	7.1	1,199	973	6.8	460	373
Svay Rieng	3.9	657	828	4.2	281	363
Takeo	6.6	1,100	888	7.3	490	406
Otdar Mean Chey	1.1	177	948	1.0	69	331
Battambang & Krong Pailin	7.4	1,246	1,036	6.8	455	373
Kampot & Krong Kep	5.0	838	873	4.8	320	336
Krong Preah Sihanouk & Kaoh Kong	2.3	379	808	2.4	160	328
Preah Vihear & Steung Treng	1.8	300	873	1.7	115	347
Mondol Kiri & Rattanak Kiri	1.2	207	833	1.6	106	397
Education [1]						
No schooling	19.4	3,259	3,746	9.0	603	704
Primary	55.8	9,374	9,125	48.4	3,254	3,341
Secondary and higher	24.8	4,159	3,920	42.6	2,860	2,672
Religion [2]						
Buddhist	97.0	16,279	15,840	96.8	6,501	6,317
Moslem	1.7	280	315	1.5	102	116
Christian	0.6	99	104	0.9	57	49
Other	0.8	127	525	0.8	56	232
Total	100.0	16,791	16,791	100.0	6,717	6,717

[1] Education categories refer to the highest level of education attended, whether or not that level was completed.
[2] Excluded are 7 women and 3 men for whom religion data are missing.

Cambodia's population is predominantly rural, with five in six Cambodians living in rural areas. Eighteen percent of the population lives in urban areas. Overall, about half of all respondents have attended some primary school without having gone on to secondary school. Over forty percent of men have attended secondary or higher education and one-quarter of women have done so. But school experience is not universal; one in ten men has never attended school, while two in ten women have never attended school.

C. Fertility

Fertility data were collected by asking each of the women interviewed for a complete history of her births. Information obtained about each woman's births included the month and year of the birth. These data are used to calculate two of the most widely used measures of current fertility, the total fertility rate (TFR) and its component age-specific fertility rates. The TFR, which is the sum of the age-specific fertility rates, is interpreted as the number of children the average woman would bear in her lifetime if she experienced the currently observed age-specific fertility rates throughout her reproductive years.

The TFR in Cambodia is 3.4 (Table 3). On average, rural women would give birth to approximately 3.5 children during their reproductive years, while urban women would give birth to fewer than three children during their reproductive years if they were to follow current levels of fertility throughout their life. Both urban and rural fertility have declined over the recent past, as the CDHS 2000 measured urban TFR of 3.1 and rural TFR of 4.2, resulting in a national TFR of 4.0 in 2000 (Figure 1).

Table 3. Current fertility

Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by urban-rural residence, Cambodia 2005

Age group	Residence		Total
	Urban	Rural	
15-19	32	51	47
20-24	133	185	175
25-29	139	188	180
30-34	134	143	142
35-39	71	94	91
40-44	47	40	41
45-49	2	5	5
TFR	2.8	3.5	3.4
GFR	89.0	115.0	110.0
CBR	23.8	25.8	25.5

Note: Rates for age group 45-49 may be slightly biased due to truncation.
 TFR: Total fertility rate for ages 15-49, expressed per woman
 GFR: General fertility rate (births divided by the number of women age 15-44), expressed per 1,000 women
 CBR: Crude birth rate, expressed per 1,000 population

Figure 1
Age-specific fertility rates
CDHS 2000 and CDHS 2005
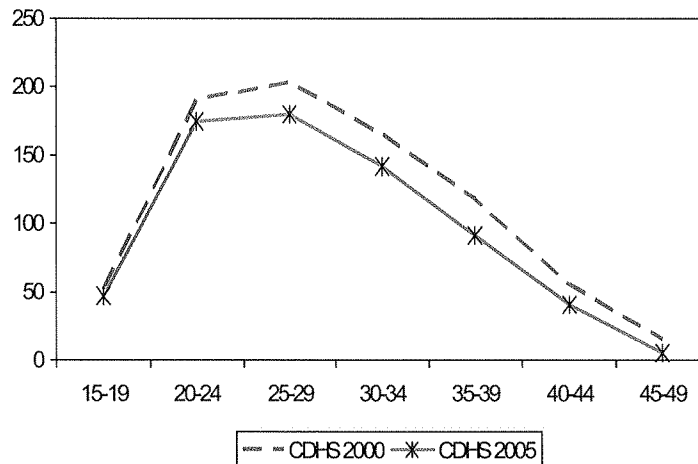
D. Family Planning

Information about knowledge and use of contraceptive methods was collected from female respondents by asking them to mention any ways or methods by which a couple can delay or avoid a pregnancy. When the respondent failed to mention a method spontaneously, the interviewer described the method and then asked if the respondent knew it. For each method known, the respondent was asked if she had ever used it. Finally, women were asked if they (or their partner) were currently using a method. Contraceptive methods are grouped into two types in the table: modern and traditional. Modern methods include female sterilization, male sterilization, pill, monthly pill, IUD, injectables, implants, male condom, and lactational amenorrhea method (LAM). Traditional methods include periodic abstinence, withdrawal, and folk methods.

Table 4 shows the level and key differentials in the current use of contraception by method as reported by currently married women. Overall, 4 of every 10 currently married women are using some method of contraception. The majority of users rely on a modern method. Use of modern contraceptive methods has increased over the recent past from 19 percent of currently married women using a modern method in the CDHS 2000 to 27 percent in the CDHS of 2005. The most commonly used modern methods are the pill and injectables (11 percent and 8 percent, respectively). Eight percent of women report to be using withdrawal.

Figure 2
Contraceptive Prevalence
CDHS 2000 and CDHS 2005
among currently married women age 15-49
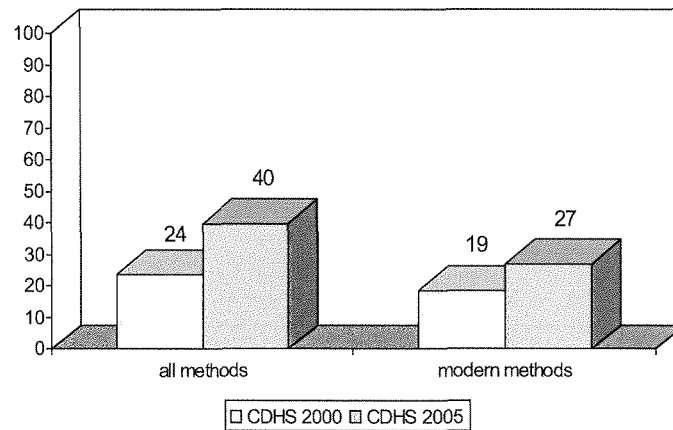
Use of both modern and traditional methods increases steadily with increasing education. Half of women with at least some secondary education use a modern or traditional method, in contrast to 30 percent of women with no education. In general, women do not begin to use contraception until they have had at least one child. One-third of currently married women with three or four children are currently using a modern method of contraception.

Method use varies across the provinces, the highest levels of each method are as follows: three percent of married women in Phnom Penh, Svay Rieng, and Battambang/Krong Pailin are sterilized, nearly 20 percent of married women in Otdar Mean Chey are using the pill, 4 percent of married women in Mondol Kiri/ Rattanak Kiri are using the Chinese pill, 5 percent of married women in Phnom Penh are using the IUD, and 13 percent of married women in Kampong Thom and Takeo are using injectables.

Table 4. Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Cambodia 2005

Background characteristic	Any method	Any modern method	Female sterili-zation	Male sterili-zation	Pill	Monthly pill/ Chinese pill	IUD	Inject-ables	Implants	Male condom	LAM	Any tradi-tional method	Periodic absti-nence	With-drawal	Folk method	Not currently using	Total	Number of women
Age																		
15-19	20.9	13.8	0.0	0.0	7.0	0.6	1.7	1.6	0.0	2.8	0.1	7.1	1.2	5.9	0.0	79.1	100.0	362
20-24	34.6	23.3	0.2	0.0	10.7	1.6	1.0	6.3	0.1	3.0	0.2	11.3	3.3	7.9	0.1	65.4	100.0	1,667
25-29	41.7	30.6	0.9	0.1	14.8	1.6	1.3	8.0	0.1	3.8	0.0	11.1	3.5	7.6	0.0	58.3	100.0	1,564
30-34	49.0	33.4	1.5	0.1	13.1	1.8	2.2	9.9	0.7	3.9	0.3	15.6	5.7	9.8	0.0	51.0	100.0	1,726
35-39	49.7	34.5	2.3	0.1	13.4	2.2	2.9	10.8	0.1	2.6	0.1	15.1	5.5	9.5	0.1	50.3	100.0	1,822
40-44	42.7	28.0	2.6	0.1	9.9	1.7	1.9	9.2	0.1	2.3	0.1	14.7	4.9	9.7	0.1	57.3	100.0	1,649
45-49	21.2	11.9	3.0	0.2	3.4	0.3	0.7	3.0	0.0	1.4	0.0	9.3	4.4	4.7	0.1	78.8	100.0	1,275
Residence																		
Urban	49.4	30.6	3.6	0.1	10.5	2.2	3.6	4.0	0.3	6.2	0.1	18.8	8.8	10.0	0.0	50.6	100.0	1,569
Rural	38.3	26.5	1.3	0.1	11.1	1.5	1.4	8.6	0.2	2.3	0.1	11.7	3.7	8.0	0.1	61.7	100.0	8,496
Province																		
Banteay Mean Chey	36.9	32.9	1.2	0.1	16.6	1.9	0.6	10.3	0.1	2.1	0.0	4.0	1.4	2.6	0.0	63.1	100.0	431
Kampong Cham	37.3	22.7	1.8	0.0	8.0	1.9	1.6	5.9	0.0	3.5	0.0	14.6	5.6	9.1	0.0	62.7	100.0	1,280
Kampong Chhnang	34.2	21.0	1.5	0.0	8.1	1.5	0.8	6.7	0.0	2.4	0.0	13.3	3.7	9.6	0.0	65.8	100.0	327
Kampong Speu	35.4	22.8	1.3	0.0	11.5	0.6	0.2	6.2	0.2	2.2	0.7	12.6	2.9	9.7	0.0	64.6	100.0	537
Kampong Thom	48.4	30.6	0.7	0.0	13.8	0.6	1.0	13.2	0.2	1.2	0.0	17.8	12.1	5.6	0.0	51.6	100.0	485
Kandal	39.8	28.9	1.2	0.0	10.2	2.3	3.3	9.1	0.2	2.6	0.0	10.9	3.9	7.0	0.0	60.2	100.0	927
Kratie	34.6	20.1	1.3	0.1	9.3	0.5	0.7	4.0	0.3	3.3	0.5	14.5	4.7	9.8	0.0	65.4	100.0	219
Phnom Penh	57.7	31.6	3.0	0.0	10.1	2.1	4.6	3.2	0.7	7.8	0.0	26.2	10.5	15.6	0.1	42.3	100.0	945
Prey Veng	35.2	24.5	1.3	0.4	8.0	1.2	1.2	10.6	0.3	1.4	0.0	10.7	2.9	7.8	0.0	64.8	100.0	878
Pursat	32.3	26.8	1.9	0.4	10.1	1.3	1.4	9.9	0.0	1.8	0.0	5.5	1.1	4.5	0.0	67.7	100.0	267
Siem Reap	29.3	20.2	1.2	0.2	8.8	0.5	1.2	4.6	0.0	3.8	0.0	9.0	2.9	5.9	0.2	70.7	100.0	710
Svay Rieng	36.7	30.8	2.8	0.2	14.6	0.6	2.3	8.9	0.1	1.3	0.0	6.0	3.0	3.0	0.0	63.3	100.0	424
Takeo	44.2	34.3	2.0	0.0	14.5	0.5	1.9	12.5	0.0	2.7	0.0	9.9	2.1	7.8	0.0	55.8	100.0	687
Otdar Mean Chey	50.3	35.1	1.0	0.3	19.0	2.4	0.3	10.1	0.3	1.5	0.1	15.2	2.7	11.3	1.2	49.7	100.0	115
Battambang & Krong Pailin	46.6	29.8	2.6	0.1	12.9	3.1	1.1	6.7	0.3	2.6	0.3	16.8	5.2	11.2	0.4	53.4	100.0	703
Kampot & Krong Kep	39.9	28.7	0.8	0.0	13.5	1.1	0.9	10.2	0.2	1.1	0.9	11.2	1.5	9.7	0.0	60.1	100.0	526
Krong Preah Sihanouk & Kaoh Kong	44.3	30.1	2.4	0.2	13.7	1.8	2.9	6.7	0.0	2.3	0.1	14.2	6.3	7.7	0.2	55.7	100.0	247
Preah Vihear & Steung Treng	30.7	25.0	0.6	0.0	10.5	2.8	0.8	8.4	0.0	1.9	0.0	5.7	0.8	4.8	0.1	69.3	100.0	208
Mondol Kiri & Rattanak Kiri	22.5	20.2	0.3	0.0	8.8	4.4	0.8	4.1	0.1	1.3	0.3	2.3	0.4	1.7	0.2	77.5	100.0	148
Education																		
No schooling	30.4	22.3	1.1	0.1	10.6	1.4	1.1	6.5	0.0	1.4	0.1	8.1	2.1	5.9	0.1	69.6	100.0	2,282
Primary	40.5	27.6	1.6	0.1	11.4	1.8	1.4	8.7	0.2	2.2	0.2	12.9	3.9	9.0	0.0	59.5	100.0	5,950
Secondary and higher	50.4	31.9	2.6	0.0	10.3	1.1	3.7	6.8	0.5	6.9	0.1	18.5	9.4	8.9	0.2	49.6	100.0	1,834
Living Children																		
0	7.0	3.3	0.0	0.0	0.6	0.3	0.0	0.1	0.0	2.2	0.0	3.7	1.1	2.6	0.0	93.0	100.0	783
1-2	42.1	28.4	1.1	0.0	12.6	1.6	2.0	7.2	0.2	3.5	0.1	13.7	4.6	9.1	0.0	57.9	100.0	3,881
3-4	48.0	32.4	2.4	0.1	12.7	1.9	2.4	9.3	0.3	3.2	0.2	15.6	6.0	9.5	0.1	52.0	100.0	3,183
5+	36.7	26.1	2.2	0.2	9.6	1.5	1.0	9.8	0.1	1.6	0.1	10.6	3.3	7.2	0.2	63.3	100.0	2,218
Total	40.0	27.2	1.7	0.1	11.1	1.6	1.8	7.9	0.2	2.9	0.1	12.9	4.5	8.3	0.1	60.0	100.0	10,066

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method.

E. Fertility Preferences

Several questions were asked to determine women's fertility preferences. These questions included: a) whether the respondent wanted another child and b) if so, when she would like to have the next child. The answers to these questions allow an estimation of the potential demand for family planning services either to limit or space births.

Table 5 indicates that over half (56 percent) of currently married women do not want to bear any more children. These women, in conjunction with the women who want to delay the birth of their next child are considered in need of family planning. Seventy-nine percent of married women say that they either want to delay the birth of their next child or want to have no more children at all. Fertility preferences are closely related to the number of living children a woman already has. In general, as the number of living children increases, the desire to stop childbearing increases dramatically. For example, nearly half of currently married women with 2 living children (46 percent) say they do not want to have more children. Two out of every three married women who have three children want no more. On the other hand, most married women with no children want to have a child; two-thirds say that they want to have a child soon.

Table 5. Fertility preferences by number of living children

Percent distribution of currently married women by desire for children, according to number of living children, Cambodia 2005

| Desire for children | Number of living children [1] | | | | | | | Total |
	0	1	2	3	4	5	6+	
Have another soon [2]	67.0	18.4	9.0	5.4	3.2	1.7	0.4	10.1
Have another later [3]	15.9	60.8	34.1	14.7	5.2	2.1	0.7	23.1
Have another, undecided when	4.3	2.5	2.8	1.9	1.1	0.6	0.1	1.9
Undecided	3.6	3.2	4.1	4.4	2.0	2.4	3.8	3.5
Want no more	3.8	12.3	46.1	67.8	82.3	83.6	83.2	55.5
Sterilized [4]	0.1	0.7	1.4	2.5	2.3	2.7	2.1	1.8
Declared infecund	5.4	2.2	2.3	3.3	3.9	6.8	9.6	4.2
Missing	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	468	1,821	2,220	1,906	1,367	1,006	1,277	10,066

[1] Includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both male and female sterilization

F. Maternal Care

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. Women who had given birth in the five years preceding the survey were asked a number of questions about maternal health care. For the last live birth in that period, mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections or iron supplements during pregnancy. For each birth in the same period, mothers were also asked what type of assistance they received at the time of delivery and where the delivery took place. Table 6 presents the information on these key maternal care indicators.

Antenatal Care

Antenatal care from a trained professional is important for monitoring the pregnancy to reduce potential

risks for the mother and child during pregnancy and delivery. Two-thirds of women (69 percent) who gave birth in the 5 years preceding the survey received antenatal care at least once from a doctor, nurse, or midwife (the relatively few that reported receiving care from a trained birth attendant were not included in this calculation). The vast majority of women who reported receiving some antenatal care received it from a midwife. The percentage of women who saw someone for antenatal care declines steadily with increasing birth order. A large differential is also seen by education, with the proportion seeing someone for antenatal care increasing steadily with rising education level.

Tetanus Toxoid and Iron Supplements

Mothers are given tetanus toxoid injections during pregnancy to prevent neonatal tetanus, a potential cause of death among infants. Figures in Table 6 on tetanus toxoid coverage come from respondent verbal reports of receiving at least one injection during pregnancy. Figures do not include data from tetanus toxoid cards. Figures do not include injections received prior to the pregnancy, data which are available in the CDHS data for further analysis.

To reduce the risk of maternal and neonatal mortality due to maternal anemia, mothers are also given iron tablets during pregnancy. When asking about tablets, interviewers showed sample tablets to respondents to clarify what types of tablets were being asked about.

Three-quarters of mothers received at least one tetanus toxoid injection and nearly two-thirds were given iron tablets. Differentials in tetanus toxoid coverage and iron supplementation vary across birth order, education, and residence in patterns similar to that seen for women receiving antenatal care. The percentage of women who report receiving a tetanus toxoid injection during pregnancy declines with increasing birth order and increases with increasing education. The percentage of women receiving iron tablets also declines with increasing birth order and increases with increasing education.

Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the baby. Although 69 percent of mothers received antenatal care from a trained provider for their most recent birth, fewer than half of babies are delivered by a health professional or at a health facility (44 percent and 22 percent, respectively). The majority of births in Cambodia are delivered at home. Of course there is significant regional variation in whether or not births are delivered in a health facility, and one-half of births to urban women were delivered in a health facility. The percentage of births delivered in a health facility climbs steadily with increasing education of the mother. One in ten births to women with no education were delivered in a health facility, two in ten births born to women with at least some primary education were delivered in a health facility, and nearly five in ten births born to women with at least some secondary schooling were delivered in a health facility.

Table 6. Maternal care indicators

Percentage of women who had a live birth in the five years preceding the survey who received specific maternal health services during pregnancy for the most recent birth, and among all live births in the five years before the survey, percentage delivered by a health professional and percentage delivered in a health facility, by background characteristics, Cambodia 2005

Background characteristic	Percent with antenatal care from health professional [1]	Percent given at least one tetanus toxoid injection [2]	Percent given iron tablets during pregnancy	Number of women	Percent delivered by a health professional [1]	Percent delivered in a health facility [3]	Number of births
Mother's age at birth							
<20	68.8	77.1	61.2	539	44.3	21.8	828
20-34	72.2	78.9	65.7	4,110	44.9	22.4	5,533
35+	59.8	69.0	53.8	1,203	39.3	18.0	1,408
Birth order							
1	80.3	83.8	74.1	1,428	54.2	31.3	2,135
2-3	73.5	79.0	65.6	2,372	45.9	22.1	3,056
4-5	60.2	71.0	55.0	1,198	34.7	14.8	1,508
6+	52.0	66.2	47.5	854	30.0	9.9	1,071
Residence							
Urban	79.2	80.0	70.6	825	70.1	50.1	1,091
Rural	67.7	76.1	61.6	5,027	39.5	16.9	6,678
Province							
Banteay Mean Chey	66.5	74.2	61.5	255	33.1	9.9	333
Kampong Cham	57.6	77.4	54.5	737	45.8	12.2	927
Kampong Chhnang	84.5	77.2	75.6	218	37.2	17.6	317
Kampong Speu	59.5	77.7	52.5	334	22.8	9.1	468
Kampong Thom	59.2	77.0	56.7	299	24.5	9.4	401
Kandal	77.8	79.5	60.1	530	73.5	36.7	680
Kratie	51.9	65.5	44.1	137	28.6	9.2	193
Phnom Penh	85.1	81.8	72.5	476	86.0	78.4	613
Prey Veng	61.0	81.3	68.2	485	28.0	13.1	617
Pursat	88.8	80.3	87.5	167	31.7	10.5	219
Siem Reap	69.3	62.2	60.9	471	28.6	19.6	662
Svay Rieng	91.7	85.7	80.9	202	28.9	8.2	256
Takeo	84.6	92.9	79.8	371	62.1	29.4	490
Otdar Mean Chey	56.0	72.3	49.9	76	15.2	5.9	103
Battambang & Krong Pailin	81.6	79.1	76.6	404	59.2	16.3	532
Kampot & Krong Kep	69.0	68.8	59.4	290	40.9	17.5	390
Krong Preah Sihanouk & Kaoh Kong	57.6	74.0	45.3	146	57.0	28.6	203
Preah Vihear & Steung Treng	38.3	63.2	35.5	153	13.0	6.0	218
Mondol Kiri & Rattanak Kiri	28.5	50.4	23.3	102	14.4	9.1	150
Education							
No schooling	50.0	65.2	47.6	1,350	22.1	9.5	1,876
Primary	70.6	78.5	64.1	3,476	42.6	19.0	4,587
Secondary and higher	90.3	85.6	78.9	1,026	79.5	47.7	1,306
Total	69.3	76.7	62.9	5,852	43.8	21.5	7,770

[1] Includes doctor, nurse, or midwife; does not include trained birth attendant.
[2] According to mother's verbal report.
   Does not include injections that may have been received prior to the pregnancy in question.
[3] Public or private medical sector, not including home of a trained birth attendant.

G. Child Health

The CDHS obtained information on a number of key child health indicators, including childhood mortality rates, immunization of young children, and treatment practices when a child is ill.

Levels of Childhood Mortality

An important objective of the CDHS was to measure the level and trend of mortality among children. Estimates of childhood mortality are based on information from the birth history section of the questionnaire administered to individual women. The section began with questions about the aggregate childbearing experience of respondents (i.e., the number of sons and daughters who live with the mother, the number who live elsewhere and the number who have died). For each of these births, information was then collected on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death. This information is used to directly estimate the following five mortality rates:

Neonatal mortality: the probability of dying within the first month of life;
Postneonatal mortality: the difference between infant and neonatal mortality;
Infant mortality: the probability of dying before the first birthday;
Child mortality: the probability of dying between the first and fifth birthday;
Under-five mortality: the probability of dying between birth and the fifth birthday.

All rates are expressed per 1,000 live births except for child mortality, which is expressed per 1,000 children surviving to 12 months of age.

Table 7 presents early childhood mortality rates for the 14 years preceding the survey. Under-five mortality for the period 0-4 years before the survey (which roughly corresponds to the years 2001-2005) is 83 per 1,000 births. This means that 1 in 12 children born in Cambodia dies before reaching their fifth birthday. Most of the mortality occurs during the first year of life: infant mortality is 65 deaths per 1,000 births, while mortality between the first and fifth birthday is 19 per 1,000 children surviving at the first birthday. Mortality during the first month, or neonatal mortality, is 28 per 1,000; while post-neonatal mortality (between the first month and the first birthday) is 37 per 1,000 and accounts for 57 percent of overall infant mortality.

Figure 3 compares the mortality indices of the CDHS 2005 to those of the CDHS 2000. All figures refer to the five years before each survey; therefore, the CDHS 2005 measures mortality during the period since the CDHS 2000.

Table 7. Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Cambodia 2005

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality [1] (PNN)	Infant mortality $(_1q_0)$	Child mortality $(_4q_1)$	Under-five mortality $(_5q_0)$
0-4	28	37	65	19	83
5-9	43	65	109	21	127
10-14	43	50	93	34	124

[1] Computed as the difference between the infant and neonatal mortality rates

Figure 3
Infant and child mortality
CDHS 2000 and CDHS 2005
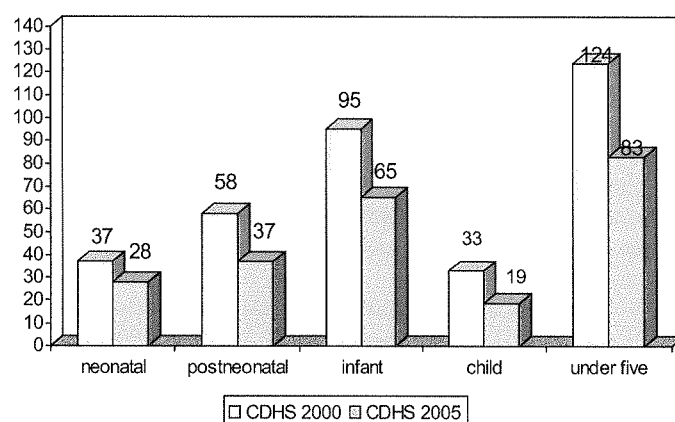
The results in Table 7 can also be used to explore the trend in early childhood mortality in Cambodia derived from data collected within the CDHS 2005. In looking at the data it is important to remember that the rates are derived from retrospective data. Thus they are subject to errors of omission and misreporting of date of birth and age at death, which are usually more common for events further back in time. For example, women age 15-49 at the time of the survey were age 10-44 during the period 5 to 9 years before the survey. This means mortality of children born to women age 45-49 cannot be known for the period 5 to 9 years before the survey. The effect of truncated information contributes a negligible margin of error for estimates of mortality for the most recent period in the past. However, for events further back in time, missing information is more important and the levels of mortality for these periods are likely to be much less accurate. For example, women age 15-49 years at the time of the survey were less than 40 years old during the period 10-14 years before the survey: therefore, mortality of children born from women age 40-49 years at that time are not included (are not known) for this period. Thus, levels of mortality estimated for 10-14 years before the survey should be considered as rough evaluations, and are likely to be underestimates.

A thorough investigation of the 2005 CDHS mortality data is beyond the scope of this report. However, in considering these data it is important to note that the 2005 CDHS estimate may reflect a real decline in mortality rates, may reflect some underestimation in mortality, or perhaps a combination of both.

Vaccination of Children

According to the World Health Organization a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis; three doses of DTC vaccine to prevent diphtheria, tetanus, and pertussis, at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. The CDHS 2005 collected information on the coverage for these vaccinations among all children under age five.

Information on vaccination coverage was obtained in two ways—from health cards and from verbal reports of mothers. All mothers were asked by interviewers to show the health cards on which their childrens' vaccinations are recorded. If the card was available, the interviewer copied into the questionnaire the dates on which each vaccination was received. If a vaccination was not recorded on the health card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a health card for her child, she was asked to recall whether the child had received BCG, polio, DTC and measles. If she indicated that the child had received the polio or DTC vaccines, she was asked about the number of doses that the child received.

Taking into consideration the vaccination schedule, Table 8 presents information on vaccination coverage for children age 12-23 months. By this age, children should be fully vaccinated against the major preventable childhood illnesses. Coverage levels include data from both health cards and verbal reports of mothers. Two-thirds of children age 12-23 months are fully vaccinated. This is an increase in coverage over the recent past, as the CDHS 2000 found 40 percent of children age 12-23 to be fully vaccinated. This increase in coverage is also accompanied by an increase in the percentage of data coming directly from health cards. (CDHS 2000 fieldwork was able to record dates directly from health cards for 48 percent of children age 12-23). At least nine out of ten children receive BCG, DTC 1, and Polio 1. However, the proportion of children receiving the second and third doses of DTC and Polio decline slightly (to about 85 percent and 78 percent, respectively), similar to the proportion that received measles vaccination (77 percent).

Full vaccination coverage varies by mother's education, climbing from 52 percent among children of mothers with no education, to 68 percent among children of mothers with primary education, to 83 percent among mothers with secondary and higher education. Full coverage is equally as high in urban and rural areas.

Table 8. Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or report of the mother), and percentage with a vaccination card seen by the interviewer, by background characteristics, Cambodia 2005

Background characteristic	BCG	DTC 1	DTC 2	DTC 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All [1]	No vacci-nations	Percent with vacci-nation card seen	Number of children
Sex of child													
Male	92.2	91.7	87.3	81.6	5.2	91.9	87.5	79.6	78.2	69.0	6.8	69.0	774
Female	90.6	89.4	82.8	74.8	4.9	89.2	83.8	74.3	75.6	64.2	7.1	64.4	741
Birth order													
1	93.4	92.5	88.7	82.7	3.5	92.6	88.6	80.4	80.4	69.7	5.4	66.3	432
2-3	93.0	92.7	87.4	80.8	6.7	92.4	88.4	79.8	77.3	68.5	4.8	71.0	603
4-5	88.1	86.0	80.1	72.6	5.9	87.2	81.4	72.3	73.1	61.2	10.4	62.4	289
6+	86.9	86.5	77.2	69.2	2.1	85.5	77.2	67.4	73.5	62.1	12.1	60.7	191
Residence													
Urban	91.9	88.8	82.8	76.8	8.0	90.5	83.2	77.7	79.1	69.4	5.3	63.1	215
Rural	91.3	90.9	85.5	78.5	4.5	90.6	86.1	76.9	76.6	66.2	7.2	67.3	1,299
Province													
Banteay Mean Chey	94.2	93.4	90.3	88.1	8.2	93.8	88.0	87.3	78.9	77.7	5.8	58.7	73
Kampong Cham	91.2	91.2	88.3	83.6	3.0	91.2	88.3	80.3	72.3	67.6	8.8	72.0	194
Kampong Chhnang	96.7	94.9	90.4	85.5	11.0	92.5	89.3	75.8	84.5	71.9	3.3	68.7	63
Kampong Speu	99.1	99.1	96.7	93.9	4.6	97.7	95.2	88.6	89.0	81.0	0.9	76.8	81
Kampong Thom	87.7	87.2	76.7	67.1	2.0	88.5	79.3	65.5	67.1	54.6	9.3	63.2	90
Kandal	95.4	95.4	92.3	89.7	5.8	95.4	92.3	89.1	81.1	78.7	4.6	83.0	119
Kratie	87.4	87.6	76.6	66.2	4.2	87.4	75.2	64.1	63.6	53.1	8.1	61.9	31
Phnom Penh	96.5	90.5	88.0	85.7	9.4	90.5	89.3	85.7	85.6	80.9	0.0	79.4	127
Prey Veng	94.8	96.4	92.4	86.4	0.0	93.7	91.1	83.7	83.8	68.5	2.0	77.4	119
Pursat	87.3	85.0	83.0	77.3	0.9	85.9	83.0	78.9	77.3	71.3	11.4	47.0	43
Siem Reap	87.0	86.8	72.5	58.7	8.3	88.5	78.9	59.1	68.6	43.0	10.1	57.5	144
Svay Rieng	89.6	87.3	81.4	77.5	0.8	84.6	81.4	78.5	71.5	66.8	8.4	68.5	40
Takeo	95.3	95.3	92.1	86.8	4.5	94.0	91.8	84.2	86.0	76.8	4.7	65.6	84
Otdar Mean Chey	89.6	91.5	88.7	79.6	1.3	96.7	94.9	86.3	71.0	64.6	3.3	65.4	24
Battambang & Krong Pailin	95.5	95.5	94.3	88.3	9.2	95.5	94.3	88.3	87.6	82.4	4.5	58.6	101
Kampot & Krong Kep	71.3	69.5	63.3	51.2	4.6	72.3	61.2	51.4	57.8	40.7	25.0	51.0	74
Krong Preah Sihanouk & Kaoh Kong	90.3	89.5	84.3	70.5	0.0	90.0	90.0	75.1	82.0	65.2	8.4	60.4	42
Preah Vihear & Steung Treng	89.7	88.0	74.2	56.8	2.6	88.2	71.6	54.7	68.2	46.4	6.9	51.4	39
Mondol Kiri & Rattanak Kiri	77.1	73.6	55.1	40.7	5.4	76.1	57.8	44.4	55.5	35.5	20.7	44.1	27
Education of mother													
No schooling	85.5	83.4	75.0	66.3	2.8	82.7	76.7	66.5	64.3	51.9	13.0	57.3	347
Primary	92.2	91.1	86.0	78.5	5.4	91.2	85.9	76.7	77.7	67.6	6.4	67.0	910
Secondary and higher	96.7	98.4	95.6	93.6	6.9	99.1	97.3	92.0	91.2	83.3	0.9	78.4	257
Total	91.4	90.6	85.1	78.3	5.0	90.6	85.7	77.0	76.9	66.6	6.9	66.7	1,514

[1] BCG, measles and three doses each of DTC and polio vaccine (excluding P0 polio vaccine given at birth)

Treatment of Childhood Illnesses

Acute respiratory illness, fever, and dehydration from severe diarrhea are major causes of childhood morbidity and mortality. Prompt medical attention for children experiencing the symptoms of these illnesses is, therefore, crucial in increasing child well-being and reducing child deaths. To obtain information on how childhood illnesses are treated, mothers were asked (for each child under the age of five years) whether in the two weeks before the survey the child had experienced cough with short, rapid breathing or difficulty breathing (symptoms of acute respiratory infection ARI), fever, and diarrhea. The percentage of children having experienced each of these illnesses within the two weeks before the survey is shown in Figure 4.

Figure 4
Prevalence of ARI, fever and diarrhea
in the two weeks prior to survey
among children under age 5
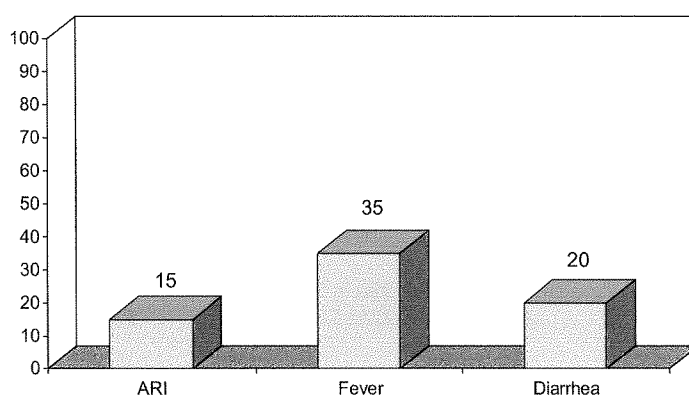
Table 9 shows treatment sought for children with these illnesses. Treatment may have been sought from either the public medical sector or the private medical sector. Among children with ARI or fever symptoms, just over half (57 percent) were taken for treatment to a health facility or health provider. Among children with diarrhea, half were taken for treatment to a health facility or health provider.

When left untreated, the dehydrating effect of diarrhea can and often does lead to death in young children. The administration of oral rehydration therapy (ORT) is a simple means of counteracting the effects of dehydration. Effective therapy can be achieved by administering either a solution prepared by mixing water with powder from a commercially prepared packet of oral rehydration salts (ORS), or a homemade fluid of porridge water or cooked rice with salt and sugar, or simply by increasing the amount of fluids given to children.

Mothers with children who had experienced diarrhea in the two weeks before the survey were asked what, if anything, had been done to treat the diarrhea. Six in ten children who had diarrhea were given some form of ORT. One in five children with diarrhea was given fluids made from a special ORS packet. The percent of children who receive some form of ORT varies greatly across the country.

<u>Table 9. Treatment for acute respiratory infection, fever, and diarrhea</u>

Among children under five years who were sick with a cough accompanied by short, rapid breathing (symptoms of acute respiratory infection - ARI) or fever in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets, and percentage given any oral rehydration therapy (ORT) by background characteristics, Cambodia 2005

	Children with symptoms of ARI or with fever		Children with diarrhea			
Background characteristic	Percent for whom treatment was sought from a health facility/ provider	Number of children with ARI/ fever	Percent for whom treatment was sought from a health facility/provider	Percent given solution from ORS packet	Percent given any ORT	Number of children with diarrhea
Age in months						
<6	48.8	233	35.4	11.1	27.4	131
6-11	67.1	364	51.9	23.0	56.4	245
12-23	57.7	664	60.2	26.5	70.7	422
24-35	60.2	524	48.8	23.5	61.3	288
36-47	48.9	475	34.7	12.0	55.7	193
48-59	55.7	408	50.7	18.1	52.3	136
Sex of child						
Male	58.2	1,375	51.8	20.7	60.2	785
Female	55.3	1,292	47.2	21.5	56.4	631
Residence						
Urban	70.8	336	59.2	26.2	51.2	169
Rural	54.8	2,331	48.5	20.4	59.5	1,247
Province						
Banteay Mean Chey	50.4	118	43.6	21.4	81.2	70
Kampong Cham	56.9	430	49.2	11.6	66.2	264
Kampong Chhnang	62.5	116	48.1	29.6	83.7	49
Kampong Speu	54.5	172	53.2	18.8	67.6	71
Kampong Thom	52.2	199	42.1	15.8	68.9	92
Kandal	76.9	203	65.6	29.6	51.4	109
Kratie	45.7	75	40.8	17.3	46.1	40
Phnom Penh	74.1	211	62.6	18.0	30.4	110
Prey Veng	53.1	203	49.3	23.1	63.4	153
Pursat	50.7	75	48.3	45.9	65.9	51
Siem Reap	44.3	139	38.4	16.6	33.6	89
Svay Rieng	69.6	55	59.6	36.8	(54.5)	23
Takeo	72.8	122	75.1	24.9	(53.3)	52
Otdar Mean Chey	44.7	44	50.9	37.4	64.2	13
Battambang & Krong Pailin	55.0	239	50.4	30.8	39.5	90
Kampot & Krong Kep	59.0	84	43.3	21.7	(73.6)	40
Krong Preah Sihanouk & Kaoh Kong	36.8	24	22.0	9.3	(47.2)	17
Preah Vihear & Steung Treng	27.1	107	28.9	13.2	71.3	54
Mondol Kiri & Rattanak Kiri	43.3	53	41.6	22.1	53.6	29
Education of mother						
No schooling	49.1	620	43.6	19.3	58.4	368
Primary	55.2	1,626	49.4	21.4	60.7	852
Secondary and higher	74.2	421	63.0	23.0	49.2	196
Total	56.8	2,668	49.8	21.1	58.5	1,416

Figures in parentheses based on 25-49 unweighted cases.
[1] Excludes shop and traditional practitioner
[2] Includes ORS, recommended home fluid, or increased fluids

H. Nutrition

Breastfeeding and supplementation

Breast milk is the optimal source of nutrients for infants. Children who are exclusively breastfed receive only breast milk. Exclusive breastfeeding is recommended during the first 6 months of a child's life because it limits exposure to disease agents as well as providing all of the nutrients that a baby requires. Table 10 shows the breastfeeding practices of mothers of children under three years of age.

Table 10. Breastfeeding status by age

Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Cambodia 2005

| Age in months | Not breastfeeding | Breastfeeding and consuming: | | | | | Total | Number of children | Percentage using a bottle with a nipple [1] | Number of children |
		Exclusively breastfed	Plain water only	Water-based liquids/ juice	Other milk	Comple-mentary food				
<2	0.5	74.0	18.4	0.0	6.4	0.7	100.0	206	5.8	208
2-3	4.8	63.0	20.1	0.0	6.9	5.1	100.0	276	12.6	276
4-5	4.8	45.6	27.9	0.1	2.4	19.2	100.0	256	13.5	257
6-7	4.8	8.0	11.5	0.9	0.2	74.6	100.0	270	11.2	271
8-9	3.2	1.2	5.9	0.0	0.0	89.8	100.0	241	11.9	242
10-11	5.0	0.1	2.4	0.0	0.0	92.5	100.0	252	13.2	258
12-15	10.1	0.0	0.3	0.0	0.2	89.4	100.0	498	13.7	503
16-19	23.0	0.0	0.3	0.2	0.0	76.5	100.0	463	11.5	480
20-23	45.8	0.0	0.1	0.0	0.0	54.1	100.0	492	10.2	532
24-27	70.0	0.0	0.0	0.0	0.0	30.0	100.0	382	10.9	454
28-31	81.2	0.0	0.0	0.0	0.0	18.8	100.0	359	7.5	446
32-35	81.3	0.0	0.0	0.0	0.0	18.6	100.0	374	5.9	515
<6	3.6	60.0	22.3	0.0	5.2	8.8	100.0	738	11.0	742
6-9	4.0	4.8	8.9	0.5	0.1	81.8	100.0	511	11.5	513

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children classified as breastfeeding and consuming plain water only consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.
[1] Based on all children under three years

Figure 5
Exclusive breastfeeding status
by child's age
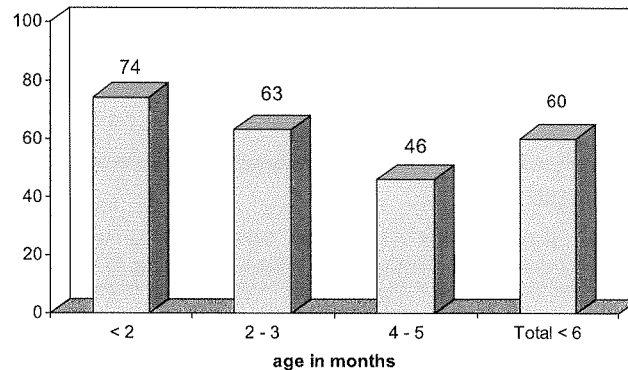
Breastfeeding is universal in Cambodia, 96 percent of children under six months are breastfed. Breastfeeding is also of fairly long duration. Nearly half of children are breastfed for two years and twenty percent are breastfed for three years.

Exclusive breastfeeding is becoming a more common practice in Cambodia, with sixty percent of children under age 6 months being exclusively breastfed. This is a significant increase in the practice of exclusive feeding, as CDHS 2000 found that only about ten percent of children under six months were exclusively breastfed. This increase may be the artificial consequence of differing methods of collecting data on exclusive breastfeeding and will require further investigation the Final Report. The remainder of breastfed infants consume water, water-based liquids or juice, other milk, or complementary foods. Nearly all children are breastfed through the first year of life, but by age 6 to 9 months, most breastfeeding children are also receiving complementary foods in addition to breast milk. Bottle feeding is not very common in Cambodia; about one in ten young children has been fed with a bottle.

Nutritional Status of Children

Under-nutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years preceding the CDHS. The height and weight data are used to compute three summary indices of nutritional status: height-for-age; weight-for-height; and weight-for-age. These three indices are expressed as standard deviation units from the median for the international reference population recommended by the World Health Organization. The Child Growth Standards applied here are those recommended by the WHO in place prior to its recent announcement, on 27 April 2006, of new international growth standards.

Children who fall more than two standard deviations (-2 SD) below the reference median are regarded as undernourished, while those who fall more than three standard deviations (-3 SD) below the reference median are considered severely undernourished. Table 11 shows the nutritional status among children under five years of age by selected background characteristics.

Children whose height-for-age is below minus two standard deviations from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is also affected by recurrent or chronic illness. Thirty-seven percent of children under five are short for their age; of those children, approximately one-third (13 percent of all children) are severely stunted.

Children whose weight-for-height is below minus two standard deviations from the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhea, or of a rapid deterioration in food supplies. In Cambodia, 7 percent of children were measured to be wasted at the time of the survey.

Children whose weight-for-age is below minus two standard deviations from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic under-nutrition. Nearly four in ten children (36 percent) are underweight.

Comparing prevalence of stunting, wasting, and underweight children with data from the CDHS 2000, the nutritional situation of Cambodia's child population has improved over the past five years, as shown in Figure 6.

Figure 6
Nutritional status of children under five
CDHS 2000 and CDHS 2005
falling 2 or more standard deviations from the median of the WHO reference population
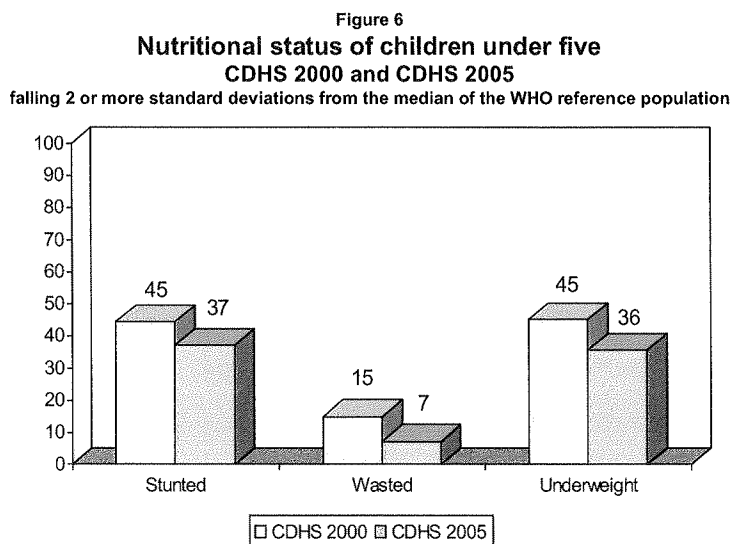
Table 11. Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Cambodia 2005

Background characteristic	Height-for-age		Weight-for-height		Weight-for-age		Number of children
	Percentage below -3 SD	Percentage below -2 SD [1]	Percentage below -3 SD	Percentage below -2 SD [1]	Percentage below -3 SD	Percentage below -2 SD [1]	
Age in months							
<6	0.2	5.6	0.6	3.6	1.2	4.7	286
6-9	1.8	9.5	0.7	4.1	1.9	10.6	242
10-11	5.0	24.7	3.0	12.2	14.4	43.6	120
12-23	13.3	42.1	1.0	11.9	6.2	41.0	776
24-35	13.3	39.1	0.5	6.9	7.9	40.2	706
36-47	17.3	43.6	0.5	6.5	9.6	41.5	747
48-59	17.6	47.6	0.7	5.2	6.7	38.3	709
Sex							
Male	13.6	38.8	0.6	7.1	6.6	35.3	1,737
Female	12.2	35.8	0.9	7.4	7.3	35.8	1,848
Residence							
Urban	9.5	30.5	0.9	8.3	6.2	34.7	486
Rural	13.4	38.3	0.7	7.1	7.0	35.7	3,099
Province							
Banteay Mean Chey	9.3	34.1	0.0	5.5	4.6	27.6	145
Kampong Cham	17.2	37.2	0.0	6.0	8.0	33.1	400
Kampong Chhnang	11.5	37.3	0.5	4.6	3.4	34.0	146
Kampong Speu	6.5	36.6	0.2	7.6	5.1	30.7	218
Kampong Thom	11.9	41.1	0.0	3.4	9.1	37.4	197
Kandal	9.7	26.8	1.4	11.5	4.1	35.0	328
Kratie	14.4	37.1	0.4	4.2	7.4	35.5	100
Phnom Penh	4.2	22.3	0.5	5.5	3.2	21.2	282
Prey Veng	14.8	38.3	2.7	11.3	13.5	41.3	262
Pursat	33.2	61.6	4.7	17.0	12.0	48.6	90
Siem Reap	19.3	53.3	0.4	6.3	9.6	47.5	311
Svay Rieng	13.3	35.4	1.4	7.8	7.0	37.6	120
Takeo	14.5	38.5	2.0	7.6	6.5	37.8	241
Otdar Mean Chey	15.3	47.3	0.0	10.3	8.0	39.2	41
Battambang & Krong Pailin	7.5	36.2	0.0	5.6	2.4	29.8	271
Kampot & Krong Kep	7.9	28.2	0.0	5.0	2.6	31.0	184
Krong Preah Sihanouk & Kaoh Kong	16.6	36.8	0.3	7.3	8.7	37.3	91
Preah Vihear & Steung Treng	12.1	42.0	0.4	9.7	9.5	48.1	90
Mondol Kiri & Rattanak Kiri	29.7	53.1	0.0	7.9	22.2	51.6	67
Mother's education							
No schooling	18.4	45.7	1.2	7.9	9.3	43.4	807
Primary	12.8	37.8	0.7	6.9	6.6	35.9	1,991
Secondary and higher	5.0	22.2	0.3	8.6	3.0	25.1	594
Mother's age [2]							
15-19	6.6	20.5	0.0	5.4	2.0	21.7	84
20-24	11.5	29.3	0.9	7.7	6.1	31.4	826
25-29	11.1	37.7	0.3	5.6	5.1	36.6	839
30-34	14.7	41.5	0.3	7.9	7.1	38.3	709
35-49	14.4	40.9	1.4	8.7	8.4	38.1	935
Mother's status							
Mother interviewed	12.8	36.8	0.7	7.4	6.6	35.6	3,330
Mother not interviewed, but in household	9.5	43.4	1.1	8.6	8.2	43.7	63
Mother not interviewed, not in household [3]	14.8	42.5	1.2	4.5	12.5	31.8	190
Total	12.9	37.2	0.8	7.3	6.9	35.6	3,585

Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the International Reference Population (-3 SD and -2 SD) are shown by background characteristics. Table is based on children who have a valid date of birth (month and year) and valid height and weight measurements. The International Reference Population used here is that which was in place prior to the recent release by WHO, on 27 April 2006, of new international Growth Standards
[1] Includes children who are below -3 SD
[2] For women who were not interviewed, information is taken from the Household Questionnaire.
    Excludes children whose mothers were not listed in the household schedule
[3] Includes children whose mothers are deceased

Anemia

Anemia is characterized by a low level of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen from the lungs to other tissues and organs in the body. Anemia can result from a nutritional deficiency of iron, folate, vitamin B_{12}, or some other nutrients. This type of anemia is commonly referred to as iron-deficiency anemia and is the most widespread form of malnutrition in the world. Anemia can also be the result of hemorrhage, chronic disease, malaria, parasitic infection or genetic disorders such as Hemoglobin E trait, beta-Thalassemia and alpha-Thalassemia.

Table 12 presents the anemia levels for children under five years of age (6-59 months) and for women age 15-49 years. Levels of anemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization (DeMaeyer et al., 1989). Children with < 7.0 g/dl of hemoglobin are classified as having severe anemia, with 7.0 – 9.9 g/dl having moderate anemia, and with 10.0 – 10.9 g/dl having mild anemia. Women with < 7.0 g/dl are classified as having severe anemia, with 7.0 – 9.9 g/dl having moderate anemia, and non-pregnant women with 10.0 – 11.9 g/dl and pregnant women with 10.0 – 10.9 g/dl as having mild anemia.

Anemia is common among children in Cambodia; six in ten children are anemic. Half of children who suffer from anemia are classified as having moderate anemia (32 percent of all children) and half are classified as having mild anemia (29 percent of all children). One percent of children are severely anemic. Anemia is less common among women; 47 percent show any evidence of anemia, and the majority of women who are anemic are mildly anemic (35 percent of all women are mildly anemic). The prevalence of anemia varies by region among both children and women.

Table 12. Anemia among children and women

Percentage of children age 6-59 months and women age 15-49 years classified as having anemia, by background characteristics, Cambodia 2005

Background characteristic		Percentage with anemia			
	Any anemia	Mild anemia	Moderate anemia	Severe anemia	Number
CHILDREN					
Residence					
Urban	59.7	29.5	29.6	0.6	400
Rural	62.2	29.0	32.5	0.7	2,756
Province					
Banteay Mean Chey	70.6	26.7	43.3	0.6	131
Kampong Cham	56.5	38.4	18.1	0.0	383
Kampong Chhnang	60.2	26.6	31.8	1.8	128
Kampong Speu	63.4	25.5	37.9	0.0	189
Kampong Thom	75.1	27.2	46.5	1.4	175
Kandal	54.9	26.1	28.8	0.0	289
Kratie	58.9	24.5	33.9	0.5	91
Phnom Penh	52.2	32.2	20.0	0.0	220
Prey Veng	57.6	27.3	29.5	0.8	232
Pursat	84.6	29.4	52.2	3.0	76
Siem Reap	78.1	25.9	51.0	1.1	283
Svay Rieng	68.5	32.0	35.6	0.9	105
Takeo	55.9	29.0	25.9	1.0	222
Otdar Mean Chey	73.2	27.8	43.1	2.3	38
Battambang & Krong Pailin	54.9	28.8	25.5	0.6	227
Kampot & Krong Kep	48.5	27.1	20.0	1.4	153
Krong Preah Sihanouk & Kaoh Kong	73.7	28.4	43.2	2.1	70
Preah Vihear & Steung Treng	67.4	32.0	35.4	0.0	85
Mondol Kiri & Rattanak Kiri	63.2	24.9	37.3	1.0	59
Total	61.8	29.0	32.1	0.7	3,156
WOMEN					
Residence					
Urban	37.2	29.1	7.1	0.9	1,472
Rural	48.5	36.5	11.0	1.0	6,929
Province					
Banteay Mean Chey	57.4	40.9	14.8	1.7	334
Kampong Cham	41.0	29.7	10.5	0.7	1,084
Kampong Chhnang	55.7	44.5	10.3	0.9	278
Kampong Speu	58.0	42.7	13.2	2.0	434
Kampong Thom	57.2	41.5	14.7	1.0	420
Kandal	45.9	35.9	9.2	0.8	775
Kratie	38.3	29.5	8.0	0.8	169
Phnom Penh	28.9	24.4	3.9	0.6	927
Prey Veng	40.8	28.7	11.1	0.9	727
Pursat	51.6	37.4	12.7	1.5	233
Siem Reap	56.4	41.5	12.6	2.4	577
Svay Rieng	49.5	39.5	9.7	0.3	342
Takeo	46.7	37.6	8.4	0.7	539
Otdar Mean Chey	56.5	38.6	16.0	1.9	84
Battambang & Krong Pailin	53.2	41.3	11.4	0.5	642
Kampot & Krong Kep	41.5	34.0	6.4	1.1	400
Krong Preah Sihanouk & Kaoh Kong	45.6	35.0	10.3	0.3	194
Preah Vihear & Steung Treng	61.7	41.1	18.7	1.9	137
Mondol Kiri & Rattanak Kiri	43.4	28.6	14.5	0.4	108
Total	46.5	35.2	10.3	1.0	8,401

Note: Table is based on children and women who stayed in the household the night before the interview. Women and children with <7.0 g/dl of hemoglobin have severe anemia, women and children with 7.0-9.9 g/dl have moderate anemia, and non-pregnant women with 10.0-11.9 g/dl and children and pregnant women with 10.0-10.9 g/dl have mild anemia.

Iodization of Household Salt

Disorders induced by dietary iodine deficiency constitute a major global nutrition concern. A lack of sufficient iodine can lead to goiter, hypothyroidism, impaired mental functions, retarded mental and physical development, and diminished school performance. Iodine deficiency in the fetus leads to increased rates of abortion, stillbirths, congenital anomalies, cretinism, psychomotor defects, and neonatal mortality. Iodine deficiency can be avoided by using salt that has been fortified with iodine (iodized salt).

Data presented in Table 13 show the results of household salt samples that were tested with a solution that detects potassium iodate (test kits manufactured by MBI Kits International). While the test kits are designed to assess iodate levels in parts per million, salt testing in the CDHS assessed presence or absence of iodate without any determination of parts per million.

Table 13. Presence of iodized salt in household

Percent distribution of households with salt tested for iodine content, by presence or absence of iodine in salt, percentage of households tested, and percentage of households with no salt, according to residence and province, Cambodia 2005

| Background characteristic | Among households with tested salt, the percent distribution by presence or absence of iodine | | | Number of households | Among all households, the percentage | | Number of households |
	No iodine	Iodine present	Total		With salt tested	With no salt	
Residence							
Urban	15.2	84.8	100.0	2,022	97.9	1.8	2,066
Rural	29.5	70.5	100.0	12,013	98.6	1.1	12,177
Province							
Banteay Mean Chey	30.6	69.4	100.0	588	98.9	0.6	595
Kampong Cham	16.0	84.0	100.0	1,978	98.3	1.7	2,012
Kampong Chhnang	18.0	82.0	100.0	538	98.9	0.5	544
Kampong Speu	28.6	71.4	100.0	758	97.8	1.9	775
Kampong Thom	20.2	79.8	100.0	681	98.8	1.1	689
Kandal	31.2	68.8	100.0	1,363	98.5	1.5	1,384
Kratie	9.6	90.4	100.0	278	95.9	4.1	289
Phnom Penh	9.0	91.0	100.0	1,160	98.3	1.2	1,180
Prey Veng	52.5	47.5	100.0	1,263	98.8	1.2	1,278
Pursat	10.0	90.0	100.0	427	99.4	0.3	430
Siem Reap	18.7	81.3	100.0	915	98.7	1.1	927
Svay Rieng	81.7	18.3	100.0	617	99.7	0.0	619
Takeo	26.0	74.0	100.0	981	98.9	0.3	991
Otdar Mean Chey	16.7	83.3	100.0	146	99.9	0.1	146
Battambang & Krong Pailin	9.0	91.0	100.0	888	99.7	0.1	891
Kampot & Krong Kep	63.2	36.8	100.0	716	98.9	1.1	724
Krong Preah Sihanouk & Kaoh Kong	18.0	82.0	100.0	310	96.9	2.7	320
Preah Vihear & Steung Treng	16.2	83.8	100.0	257	98.1	0.6	262
Mondol Kiri & Rattanak Kiri	35.7	64.3	100.0	171	91.7	5.2	186
Total	27.5	72.5	100.0	14,035	98.5	1.2	14,243

Data are based on the 99 percent of households where salt was tested. In Cambodia, three-quarters of households (73 percent) use iodized salt. There are significant differentials across the provinces, with many provinces having over 80 percent of all households using iodized salt, while in Svay Rieng and Kampot/Krong Kep fewer than 4 in ten households use iodized salt. This is a complete turn-around from the time of the CDHS 2000, when 85 percent of households used salt that did not contain iodine.

I. HIV/AIDS

The HIV/AIDS epidemic is a serious threat to social and economic development around the world. The CDHS included a series of questions that addressed respondents' knowledge about AIDS and their awareness of modes of transmission of the human immunodeficiency virus that causes AIDS, and of behaviors that can prevent the spread of HIV.

Table 14. Knowledge of AIDS

Percentage of women and men who have heard of AIDS and believe there is a way to avoid HIV/AIDS, by background characteristics, Cambodia 2005

Background characteristic	Women			Men		
	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number
Age						
15-19	98.3	82.6	3,595	98.3	90.1	1,659
20-24	98.3	81.5	3,039	99.3	92.2	1,219
25-29	98.7	83.5	2,047	99.2	93.0	829
30-39	98.6	80.9	4,303	99.6	93.7	1,665
40-49	99.0	79.2	3,808	99.5	93.5	1,345
Marital status						
Never married	98.0	81.7	5,344	98.5	91.1	2,601
Married or living together	99.0	81.3	10,066	99.5	93.3	3,964
Divorced/separated/widowed	97.8	79.7	1,382	99.9	93.0	152
Residence						
Urban	99.5	88.4	2,969	99.3	92.1	1,132
Rural	98.4	79.8	13,822	99.1	92.5	5,585
Province						
Banteay Mean Chey	98.2	64.3	649	98.0	77.5	252
Kampong Cham	95.9	68.6	2,113	100.0	91.4	869
Kampong Chhnang	99.8	98.6	555	99.7	98.3	234
Kampong Speu	99.6	88.4	869	99.4	98.3	347
Kampong Thom	98.9	79.7	798	99.3	90.6	330
Kandal	99.9	97.9	1,609	99.5	97.7	681
Kratie	95.5	72.0	330	99.0	96.3	127
Phnom Penh	100.0	96.4	1,893	99.6	94.1	736
Prey Veng	99.3	73.1	1,393	100.0	96.8	481
Pursat	96.3	62.1	480	87.8	62.0	201
Siem Reap	100.0	64.0	1,199	99.4	85.9	460
Svay Rieng	100.0	87.0	657	100.0	94.0	281
Takeo	99.9	73.1	1,100	100.0	98.1	490
Otdar Mean Chey	100.0	90.7	177	99.9	98.5	69
Battambang & Krong Pailin	100.0	99.6	1,246	99.7	89.3	455
Kampot & Krong Kep	99.9	93.7	838	99.4	94.1	320
Krong Preah Sihanouk & Kaoh Kong	98.9	74.2	379	100.0	98.0	160
Preah Vihear & Steung Treng	92.3	57.1	300	97.1	93.6	115
Mondol Kiri & Rattanak Kiri	73.9	47.2	207	96.4	90.4	106
Education						
No schooling	95.6	66.2	3,259	96.5	85.9	603
Primary	99.0	81.2	9,374	99.1	90.9	3,254
Secondary and higher	100.0	93.3	4,159	99.8	95.5	2,860
Total	98.6	81.3	16,791	99.2	92.4	6,717

Table 14 shows that virtually all women and men say that they have heard of AIDS (99 percent). However, fewer women than men report that they believe there is a way to avoid HIV/AIDS (81 and 92 percent, respectively). One-third of women who have never attended school do not know whether there is a way to avoid HIV/AIDS.

Use of Condoms

AIDS prevention initiatives focus their messages and efforts on three important aspect of behavior summed up in the ABC approach: Abstinence (outside of marriage), Be faithful (to one partner), and Use Condoms (in high-risk sexual relationships) (Shelton et al., 2004). The CDHS asked a series of questions to women and men related to these behaviors in order to monitor certain HIV/AIDS indicators. Tables 15.A and 15B present information on condom use among women and men during their last sexual encounter with their spouse (or cohabiting partner) and during their last sexual encounter with a non-cohabiting partner.

Table 15A. Use of condoms by type of partner: women

Among women who have had sexual intercourse in the past year, percentage who used a condom during last sexual intercourse with spouse or cohabiting partner, with non-cohabiting partner, and with any partner, by background characteristics, Cambodia 2005

Background characteristic	Spouse or cohabiting partner		Non cohabiting partner		Any partner	
	Percent	Number	Percent	Number	Percent	Number
Age						
15-19	1.0	370	*	5	1.3	375
20-24	2.9	1,661	*	6	3.0	1,667
25-29	3.5	1,543	*	4	3.7	1,547
30-39	3.1	3,542	*	2	3.1	3,543
40-49	2.4	2,845	*	2	2.4	2,847
Marital status						
Never married	na	0	*	3	*	3
Married or living together	2.8	9,812	*	10	2.9	9,822
Divorced/separated/widowed	3.5	150	*	4	4.3	154
Residence						
Urban	5.9	1,535	*	9	6.0	1,544
Rural	2.3	8,427	*	8	2.3	8,435
Province						
Banteay Mean Chey	2.5	420	*	0	2.5	420
Kampong Cham	3.5	1,275	*	0	3.5	1,275
Kampong Chhnang	2.3	328	*	0	2.3	328
Kampong Speu	2.4	535	*	2	2.5	537
Kampong Thom	1.5	476	*	1	1.5	478
Kandal	2.9	921	*	0	2.9	921
Kratie	3.2	216	*	0	3.2	216
Phnom Penh	6.5	928	*	9	6.7	937
Prey Veng	1.4	840	*	0	1.4	840
Pursat	1.1	274	*	0	1.1	274
Siem Reap	3.5	713	*	0	3.5	713
Svay Rieng	1.1	422	*	2	1.7	424
Takeo	2.0	684	*	0	2.0	684
Otdar Mean Chey	2.2	116	*	1	2.7	117
Battambang & Krong Pailin	4.0	696	*	0	4.0	696
Kampot & Krong Kep	1.1	528	*	0	1.1	528
Krong Preah Sihanouk & Kaoh Kong	3.2	243	*	2	3.2	245
Preah Vihear & Steung Treng	1.5	206	*	1	1.6	207
Mondol Kiri & Rattanak Kiri	1.5	142	*	0	1.5	142
Education						
No schooling	1.3	2,253	*	6	1.3	2,259
Primary	2.4	5,887	*	7	2.4	5,895
Secondary and higher	6.2	1,821	*	4	6.4	1,826
Total	2.8	9,962	*	17	2.9	9,979

Table 15B. Use of condoms by type of partner: men

Among men who have had sexual intercourse in the past year, percentage who used a condom during last sexual intercourse with spouse or cohabiting partner, with non-cohabiting partner, and with any partner, by background characteristics, Cambodia 2005

Background characteristic	Spouse or cohabiting partner		Non cohabiting partner		Any partner	
	Percent	Number	Percent	Number	Percent	Number
Age						
15-19	(2.1)	30	80.2	64	55.9	91
20-24	5.4	446	84.7	189	27.1	604
25-29	6.0	606	85.7	133	16.7	695
30-39	4.4	1,563	79.1	138	5.4	1,585
40-49	4.8	1,291	74.8	64	5.1	1,295
Marital status						
Never married	*	2	88.1	274	87.3	275
Married or living together	4.8	3,911	78.7	264	5.3	3,925
Divorced/separated/widowed	*	23	(66.6)	50	49.3	70
Residence						
Urban	8.5	586	88.1	205	24.6	728
Rural	4.2	3,351	78.8	383	8.5	3,541
Province						
Banteay Mean Chey	8.0	160	*	9	11.1	166
Kampong Cham	5.9	546	(73.8)	64	7.8	570
Kampong Chhnang	5.0	132	*	7	6.7	135
Kampong Speu	3.5	206	(76.3)	25	9.6	222
Kampong Thom	3.9	190	62.6	62	9.5	204
Kandal	10.5	379	(96.7)	60	19.9	423
Kratie	2.9	81	*	6	6.5	85
Phnom Penh	7.2	353	91.7	162	28.9	468
Prey Veng	0.0	302	(76.9)	40	1.4	311
Pursat	3.9	109	*	5	4.2	112
Siem Reap	3.7	279	*	26	10.9	304
Svay Rieng	2.1	167	*	5	3.5	170
Takeo	3.4	285	*	23	4.6	294
Otdar Mean Chey	0.0	44	*	3	4.7	46
Battambang & Krong Pailin	7.0	263	(82.8)	46	15.7	295
Kampot & Krong Kep	1.3	202	*	13	4.2	209
Krong Preah Sihanouk & Kaoh Kong	4.1	90	(85.7)	22	14.7	103
Preah Vihear & Steung Treng	4.7	77	*	3	6.2	79
Mondol Kiri & Rattanak Kiri	1.8	70	(78.3)	8	6.8	74
Education						
No schooling	1.9	493	(55.4)	22	3.0	503
Primary	3.7	2,033	75.3	235	7.5	2,142
Secondary and higher	7.6	1,410	88.6	331	18.8	1,625
Total	4.9	3,936	82.0	588	11.3	4,269

na = Not applicable
* Figure based on fewer than 25 unweighted cases and has been suppressed.
() Figure in parentheses based on 25-49 unweighted cases.

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